Focus on Arkansas

The Fiscal Impacts of School Consolidation
Research Based Conclusions

Consolidation proponents often argue that consolidating schools and/or districts will lower per pupil costs. But a stream of studies over half a century casts doubts on this assumption.

Many consolidation decisions are justified in part on projected cost savings. These projections are based on standard economic theory regarding "economies of scale." Theoretically, certain fixed costs – such as the number of administrators or the amount spent on utilities -- do not increase, and may even decrease, when the number of students in a school or district increases with consolidation. With more students and the same or lower costs, the total cost per student should come down. Some analysts and many consolidation proponents accept as an article of faith that larger schools and larger districts have lower costs per pupil than smaller ones.

But the relationship between size and cost is not that clear, as the many studies reveal:

- An early study by Hirsch (1960) of 29 school districts near St. Louis reviewed costs not only on a per pupil basis, but based on number of pupils per square mile, and rate of increase in enrollment. Hirsch concluded that there were no consistent economies of scale, and that sharing academic programs would be a more cost-effective way than consolidation to deal with the fiscal problems of districts.

- A quarter of a century later, Valencia (1984) reviewed 40 studies on the impact of school closures on costs and other factors. He concluded that "closing schools reduces per-pupil costs very little, if at all." One of the leading studies Valencia reviewed (Andrews 1974) examined school closures in 49 districts nationwide. Of the 49 districts, 35 had projected cost savings in support of the proposed closures. Andrews compared these projections with the actual changes in cost after the closures. Of the 35, only 12 had actually calculated the changes in cost after the closures. Of the 12, only four were able to report actual savings, six concluded the closures had no cost impacts, and two reported actual cost increases.

- Later, Jewell (1989) studied data from 50 states and the District of Columbia and found that per pupil cost and student enrollment were not statistically related, suggesting that there are no economies of scale.

- At the same time, Kennedy et al (1989) analyzed 330 school districts in Arkansas and found very slight correlations between district size and cost per student (measured as Average Daily Attendance), with the cost being lower in the larger districts. Test scores

at some grade levels were higher in smaller districts and some were higher in larger districts. Larger districts were also more likely to have higher drop out rates. All of these correlations, however, were very slight and not practically significant. The authors concluded that "there is no evidence to suggest that consolidation of small school districts into larger ones will necessarily reduce expenditures per student, increase standardized test scores, or reduce dropout rates."

- More recently, Streifel et al (1991) analyzed the revenue and expenditure changes for three years before and after 19 school district consolidations, comparing the rate of change to the state average rate of change. The 19 were selected from information supplied by state departments of education. Five of the 19 were in Arkansas. He found a no statistically significant relationship between changes in the total cost per pupil of the consolidated districts and the other districts in the same states and concluded that "…there appears to be no overall basis for expecting that significant financial advantage or increased revenue are necessary outcomes of consolidation."

- And most recently, the Charleston Gazette, in a national award winning series of articles on the cost of school closings in West Virginia, found that over a ten year period the state closed 325 schools in pursuit of economies of scale, and in doing so substantially increased the number of central office administrators, despite the fact that the number of students being served by the system declined by 41,000 in this period. Meantime, per pupil transportation costs more than doubled (Eyre and Finn 2003).

Why do costs increase with consolidation, and what kinds of costs increase?

Projected cost savings from consolidation are either temporary or illusory because lower costs in some expenditure categories are often offset by higher costs in other areas.

Streifel's study noted above is revealing. He analyzed the expenditure patterns before and after consolidation for six expenditure categories (administration, instruction, transportation, operation and maintenance, total cost, and capital costs). Of these six, only savings in "administrative costs" was related to consolidation at a statistically significant level. Consolidated districts increased administrative costs 10 percent while the average cost increase was 31 percent. Although this relationship was statistically significant, the relationship was not uniform. In three of the 19 consolidation cases, including one of the Arkansas districts, the district administrative costs actually increased more than the state average.

But what might have been saved in administrative costs was often more than offset by increases in other costs. As a result, although not statistically significant, total costs per pupil actually increased more in the 19 consolidating districts than statewide average increases (32% compared to 29%), including in three of the five Arkansas districts.

It is interesting that in the category of "instruction costs" (where one might expect any savings from lower administrative costs to be shifted in the interest of educational quality improvement) the increases in spending in the 19 consolidating districts were actually lower than the state average increases in spending (25% compared to 29% overall, and in 11 of the 19 districts individually).

And significantly, Streifel found that whether a consolidation proved fiscally advantageous or disadvantageous with respect to a particular expenditure category did not depend on how big the consolidating districts or the resulting consolidated districts were.

Consolidation and Equity

Valencia (1984) also concluded from this literature search that schools with large percentages of low-income and minority students have experienced most of the closings in five major cities, and that the school closings reduced parental involvement in children's education and decreased public support for educational bond levies. These impacts raise significant equity issues. In Phoenix, a federal court agreed with plaintiffs who filed a lawsuit claiming that consolidation decisions unfairly selected a minority school for closing. The court ruled that the plaintiffs "have a right to expect that the administration of the schools of this city will be done fairly, without discrimination or undue adverse impact to any particular segment of the student population."

Reasons Why Consolidation May Impose Fiscal Hardships

Numerous reasons have been suggested for the increased costs or reduced revenues that may result from consolidation (Sher and Tompkins 1977):

- Moving personnel from salary schedules of smaller schools and districts to higher salary schedules of larger schools and districts. Increasing bargaining power of teachers.
- More specialized staff
- Higher costs of having to transport more kids longer distances.
- Higher rates of vandalism
- Lower support for bond levies
- Need for new and larger facilities

Some of these changes may result in improved school performance. Some clearly do not.

The Fiscal Impacts of the Socio-Economic Effects of Consolidation

The socio-economic impact of schools on communities is significant, and school closures reduce the fiscal capacity of local communities to provide support for education.

Lyson (2002) analyzed data from all 352 incorporated villages and towns with populations of under 2,500 in New York State, almost all of which had had a school at one time. He compared the 71 places with 500 or fewer people with the 281 with more than 500 people. Almost three-fourths of the larger group had a school (73.7%), while only about half (52.1%) of the smaller group did. Those with and without schools in each of the size categories had similar age level profiles, percent of households with children, and percent of children enrolled in school, but the economic and fiscal capacity of the communities without schools was much lower than that of the communities with schools. Among the smaller size grouping of towns and villages:

- Sixty percent of the communities with schools saw population growth from 1990 to 2000; only 46 percent of those without schools grew.
- Average housing values in the communities with schools are 25 percent higher than in those without schools. Their houses are newer, and more likely to be served by municipal water and sewer systems.
- Communities with schools enjoy higher per capita incomes, a more equal distribution of income, less per capita income from public assistance, less poverty and less child poverty.

- Communities with schools have more professional, managerial, and executive workers; more households with self-employment income; 57 percent higher per capita income from self- employment; a higher percentage of residents who work in the village; and fewer workers who commute more than 15 minutes to their jobs.

The differences between larger rural communities with schools and those without were similar, but not as extreme as the differences in the smaller communities.

An earlier similar study reached similar conclusions. Dreier and Goudy (1994) compared population changes in incorporated Iowa towns that had or did not have a high school. Half the communities with a high school gained a significant amount (5 percent or more) of population over 2 or more decades while three-fourths of communities without a high school were losing population. They concluded that a community without a high school loses population faster than all communities losing population during the same time period.

Sederberg (1987) studied the secondary economic impacts of school districts in six rural Minnesota counties and found:

- School district payroll ranged from 4-9 percent of total county payroll.
- Total take-home pay from school district jobs ranged from 5-10 percent of the counties' retail sales.
- School district expenditures ranged from 1-3 percent of total retail sales.
- People employed by the school district ranged from 1-5 percent of all employed people in the counties.

Finally, Petkovich and Ching (1977) examined changes in retail sales and total labor supply that could be expected if the local high school in an agricultural community in Nevada were closed. An input-output model constructed from survey data predicted that closing the high school would produce an eight percent decrease in retail sales and a six percent decrease in labor supply.

Conclusion

School and school district consolidation produces fewer fiscal benefits and more fiscal costs than is popularly believed. Administrative cost savings are most likely, but these savings may often be largely offset by other cost increases, especially for transportation. Consolidating schools can also adversely affect the local economy, reducing the fiscal capacity of the school district. These costs are disproportionately imposed on poor and minority communities.

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